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2163	

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DATE MAILED: 08/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/619,349	HARJANTO, ANDY
	Examiner	Art Unit	
	Patrick A. Darno	2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>25 April 2006</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-28</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-28</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>14 July 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1, 3, 9, 12, 17, 19, 20, 22, 24, and 25 have been amended. Claim

28 has been added. Claims 1-28 are pending in this office action.

Claim Rejections - 35 USC § 112, First Paragraph

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and
> process of making and using it, in such full, clear, concise, and exact terms as to enable any
> person skilled in the art to which it pertains, or with which it is most nearly connected, to make
> and use the same and shall set forth the best mode contemplated by the inventor of carrying
> out his invention.

2.   Claims 1-28 are rejected under 35 U.S.C. 112, first paragraph, as failing to

comply with the written description requirement. The claim(s) contains subject

matter which was not described in the specification in such a way as to

reasonably convey to one skilled in the relevant art that the inventor(s), at the

time the application was filed, had possession of the claimed invention.

With respect to claim 1, the claim recites the limitation "class definitions for

a service class." However, there is no mention of a "service class" in the

Applicant's specification. Furthermore, since there is no mention of a "service

class" in the specification, there surely is not support for "class definitions for a

service class." The example given here is for one specific limitation. However,

all limitations of claim 1 containing a "service class" are considered to lack proper

written description. In order to overcome this rejection, the applicant must either

point out in the Applicant's specification where the proper support for this

limitation is located or the Applicant must amend the claims to eliminate the

reference to a "service class." Correction is required.

Claims 9 and 19 are rejected because the claims contain the same

deficiencies as claim 1. Appropriate correction is required.

Claims 2-8, 10-18, and 20-28 are rejected because the claims inherit the

deficiencies of 1, 9, or 19.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.   Claims 1-2, 9, 13, 16, 19, 23, and 25-26 are rejected under 35

U.S.C. 102(b) as being anticipated by the book "Building XML Web Services for

the Microsoft®.NET Platform" published by Microsoft Press and written by Scott

Short (hereinafter "Short").

<u>**Claim 1:**</u>

Short discloses a computer-readable medium having computer-executable

instructions for a client on computer network to performing steps for accessing a

database on the network via a server, comprising:

receiving a description document from the server for describing a service

(Short: Chapter 1 – "Why Web Services?", Section 2: "Web Services Design Decisions",

Subsection: "Choosing Description Mechanisms, particularly lines 1-3 and 13-14 of this

subsection; This reference describes a WSDL document (description document) which is

transferred between client, Web Server, and server in order to facilitate communication between

the three components. Note that the WSDL document describes a Web Service. Also note

Chapter 1 – "Why Web Services?", Section 1: "Web Services Building Blocks".), the

description document having:

class definitions for generic object class (Short: Chapter 7 – "XML

Serialization", Section 4: "Creating Derived Datatypes", lines 1-5 and 6-25);

a plurality of object type classes derived from the generic object

class, wherein each of the plurality of object type classes corresponds to a

type of object in the database (Short: Chapter 7 – "XML Serialization", Section 4:

"Creating Derived Datatypes", lines 1-5 and 6-25; Note that the program code listed from

lines 6-25 are identical to the program code listed under paragraph [0026] of the

applicant's specification. The generic class of the reference is Tire and the object type

classes derived from the generic class are AutoTire and MountainBikeTire. Each object

type class (AutoTire and MountainBikeTire) corresponds to the type Tire, whose

definition is stored in some form of database.); and

class definitions for a service class (Short: Chapter 6 – "ASP.NET",

Section 10: "Using the WSDL Utility to Generate Proxy Code", line 26; Note specifically

the class definition for the Web service itself. This class is the 'service class'.);

a plurality of database operation methods defined for the generic

object class and derived from the service class (Short: Chapter 7 – "XML

Serialization", Section 6: "Defining the AcceptPO Web Method", lines 1-16 and Short:

Chapter 7 – "XML Serialization", Section 4: "Creating Derived Datatypes", lines 1-5 and

6-25 and Chapter 1; The first reference listed here discloses the process of adding a

method to a generic type. It should be noted that adding a method (or member function)

to an object (or class) is very well known in the art. The second reference listed here

clearly shows the process of deriving a second object from a first object.);

        at least one flag statement identifying an object type (Short: Chapter 7

– "XML Serialization", Section 4: "Creating Derived Datatypes", lines 6-7 and lines 26-

28; The flag statement is the XmlInclude statement on lines 6-7. Each include statement

distinguishes an object type class corresponding to a type of object in the database. In

this case the object type is a particular type of Tire.); **and**

generating a database access request message for performing a

database operation on a selected object type (Short: Chapter 1 – "Why Web Services?",

lines 67-68; The code presented in Chapter 7, WSDL documents, and Web Services are used for

the purpose of generating database access requests in order to perform remote database

operations.), **including:**

        determining whether the selected object type is the object type

identified by the flag statement (Short: Chapter 7 – "XML Serialization", Section 4:

"Creating Derived Datatypes", lines 6-25 and 26-28; This reference and the explanation

of this reference below clearly show how an object type is identified by the 'xmlinclude'

flag.);

        if the selected object type is the object type identified by the flag

statement, creating an object of the selected object type using the class

definition for the selected object type in the received description document

(Short: Chapter 7 – "XML Serialization", Section 4: "Creating Derived Datatypes", lines

6-25 and 26-28; The program code is the exact program code presented in the applicant's

specification and functions in the same exact manner. An object type (AutoTire or

MountainBikeTire) is identified by the XmlInclude flag and a new object is created using

the input parameters. An AutoTire would have the AspectRatio parameter. The program

code in lines 6-25 are included in the WSDL description document as described briefly in

Chapter 1 and in depth in Chapter 5 of Short's book.);

serializing the created object of the selected object type and

including the serialized object in the request message (Short: Chapter 7 –

"XML Serialization", Section 4: "Creating Derived Datatypes", lines 5; Also see

Chapter 1 – "Why Web Services?", Section 2: "Web Services Design Decisions",

Subsection: "Choosing Description Mechanisms, particularly lines 1-3 and 13-

14.).

Claim 2:

Short discloses all the elements of claim 1, as noted above, and Short

further discloses wherein the description document is in the Web Services

Description Language (Short: Chapter 1 – "Why Web Services?", Section 2: "Web Services

Design Decisions", Subsection: "Choosing Description Mechanisms, particularly lines 1-3 and

13-14 of this subsection; This reference describes a WSDL document (description document)

which is transferred between client, Web Server, and server in order to facilitate communication

between the three components. Also note Chapter 1 – "Why Web Services?", Section 1: "Web

Services Building Blocks".).

Claim 9:

Short discloses a computer-readable medium having computer-executable

instructions for a server of a runtime environment platform to perform steps for

providing a service of accessing a database, comprising:

sending, in response to a query from a client, a description document to

the client (Short: Chapter 1 – "Why Web Services?", Section 2: "Web Services Design

Decisions", Subsection: "Choosing Description Mechanisms, particularly lines 1-3 and 13-14 of

this subsection; This reference describes a WSDL document (description document) which is

transferred between client, Web Server, and server in order to facilitate communication between

the three components. Also note Chapter 1 – "Why Web Services?", Section 1: "Web Services

Building Blocks".), the description document containing:

> class definitions for a generic object class ();

> a plurality of object type classes derived from the generic object

class and derived from the service class, (Short: Chapter 7 – "XML

Serialization", Section 4: "Creating Derived Datatypes", lines 1-5 and 6-25; Note that the

program code listed from lines 6-25 are identical to the program code listed under

paragraph [0026] of the applicant's specification. The generic class of the reference is

Tire and the object type classes derived from the generic class are AutoTire and

MountainBikeTire. Each object type class (AutoTire and MountainBikeTire)

corresponds to the type Tire, whose definition is stored in some form of database.);

> class definitions for a service class (Short: Chapter 6 – "ASP.NET",

Section 10: "Using the WSDL Utility to Generate Proxy Code", line 26; Note specifically

the class definition for the Web service itself. This class is the 'service class'.);

> a plurality of database operation methods defined for the generic

object class and derived from the service class (Short: Chapter 7 – "XML

Serialization", Section 6: "Defining the AcceptPO Web Method", lines 1-16 and Short:

Chapter 7 – "XML Serialization", Section 4: "Creating Derived Datatypes", lines 1-5 and

6-25; The first reference listed here discloses the process of adding a method to a generic

type. It should be noted that adding a method (or member function) to an object (or

class) is very well known in the art. The second reference listed here clearly shows the

process of deriving a second object from a first object.);

receiving a request message from the client for performing a requested

database operation method, the request message including a serialized object

for the requested database operation method (Short Chapter 7 – "XML Serialization",

Section 6: "Defining the AcceptPO Web Method", lines 19-21; Also note that the purpose of the

Web Service is to allow the client to request database operations. Web Services accept request

from clients in a certain format and then translate that format into the format needed to access a

server (database). Web Services also translate the response from the server into a form suitable

for the client. This is well known in the art and admitted prior art as stated in paragraph [0002] of

the applicant's disclosure under "Background of the Invention".);

deserializing the serialized object;

identifying an object type and parameters of the deserialized object; and

accessing the database to carry out the requested database operation

method based on the object type and parameters of the deserialized object (Short:

Chapter 7 – "XML Serialization", lines 1-4 and Chapter 7 – "XML Serialization", section 4:

"Creating Derived Datatypes", lines 6-7 and Short: Chapter 1 – "Why Web Services?", lines 67-

68; The first reference cited here shows that the process of XML Serialization handles both

serialization and deserialization of objects. The second reference shows the XmlInclude

command, which is used to identify object types. And the third reference shows that Web

Services are used to carry out activities at the request of a client.).

Claim 13:

Short discloses all the elements of claim 9, as noted above, and Short

further discloses wherein the description document is in the Web Services

Description Language (WSDL) (Short: Chapter 1 – "Why Web Services?", Section 2: "Web

Services Design Decisions", Subsection: "Choosing Description Mechanisms, particularly lines

1-3 and 13-14 of this subsection; This reference describes a WSDL document (description

document) which is transferred between client, Web Server, and server in order to facilitate

communication between the three components. Also note Chapter 1 – "Why Web Services?",

Section 1: "Web Services Building Blocks".).

Claim 16:

Short discloses all the elements of claim 9, as noted above, and Short

further discloses wherein the step of accessing the database to carry out the

requested database operation method includes communicating with a database

server for the database (Short: Chapter 1 – "Why Web Services?", Section 1: "Web Services

Building Blocks", lines 25-28; Note especially "message must be transferred between the client

and the server". This requires communication between the client and the database server.).

Claim 19:

Short discloses a Web service for accessing a database, comprising

means for providing a description document containing:

class definitions for a generic object class (Short: Chapter 7 – "XML

Serialization", Section 4: "Creating Derived Datatypes", lines 1-5 and 6-25 and Chapter 1 –

"Why Web Services?", lines 1-18; Note that the program code listed from lines 6-25 are identical

to the program code listed under paragraph [0026] of the applicant's specification. The generic

class of the reference is Tire and the object type classes derived from the generic class are

AutoTire and MountainBikeTire.);

a plurality of object type classes derived from the generic object class and

wherein each of the plurality of object type classes corresponds to a type of

object in the database (Short: Chapter 7 – "XML Serialization", Section 4: "Creating

Derived Datatypes", lines 1-5 and 6-25 and Chapter 1 – "Why Web Services?", lines 1-18; Note

that the program code listed from lines 6-25 are identical to the program code listed under

paragraph [0026] of the applicant's specification. The generic class of the reference is Tire and

the object type classes derived from the generic class are AutoTire and MountainBikeTire. Each

object type class (AutoTire and MountainBikeTire) corresponds to the type Tire, whose definition

is stored in some form of database. The second reference given here from Chapter 1 is an

introduction to Web Services that makes clear a computer system for carrying out the program

code presented throughout the text. Specifically line 18 cites "Clients" communicating with the

"server" over the "internet". "Clients" and "servers" are known in the art to include a CPU,

memory, and operating systems providing a **means for** carrying out the suggestions set forth in

the text written by Short. Examiner notes that the "client", "server", and "internet" provide the

means for all of the further cited portions in the rejection of claims 19-27.);

   class definitions for a service class (Short: Chapter 6 – "ASP.NET", Section 10:

"Using the WSDL Utility to Generate Proxy Code", line 26; Note specifically the class definition

for the Web service itself. This class is the 'service class'.);

   a plurality of database operation methods defined for the generic object

class and derived from the service class (Short: Chapter 7 – "XML Serialization",

Section 6: "Defining the AcceptPO Web Method", lines 1-16 and Short: Chapter 7 – "XML

Serialization", Section 4: "Creating Derived Datatypes", lines 1-5 and 6-25; The first reference

listed here discloses the process of adding a method to a generic type. It should be noted that

adding a method (or member function) to an object (or class) is very well known in the art. The

second reference listed here clearly shows the process of deriving a second object from a first

object.);

means for sending, in response to a query from a client, the description

document to the client (Chapter1 – "Why Web Services?", line 18; The means for sending

the description document are the "client" (known in the art to be a computer comprising CPU,

memory, operating system, etc.) and the "internet".);

means for receiving a request message from the client for performing a

requested database operation method, the request message including a

serialized object for the requested database operation method (Short Chapter 7 –

"XML Serialization", Section 6: "Defining the AcceptPO Web Method", lines 19-21; Also note

that the purpose of the Web Service is to allow the client to request database operations. Web

Services accept request from clients in a certain format and then translate that format into the

format needed to access a server (database). Web Services also translate the response from the

server into a form suitable for the client. This is well known in the art and admitted prior art as

stated in paragraph [0002] of the applicant's disclosure under "Background of the Invention".);

means for deserializing the serialized object ();

means for identifying an object type and parameters of the deserialized

object (); and

means for accessing the database to carry out the requested database

operation method based on the object-type and parameters of the deserialized

object (Short: Chapter 7 – "XML Serialization", lines 1-4 and Chapter 7 – "XML Serialization",

section 4: "Creating Derived Datatypes", lines 6-7 and Short: Chapter 1 – "Why Web Services?",

lines 67-68; The first reference cited here shows that the process of XML Serialization handles

both serialization and deserialization of objects. The second reference shows the XmlInclude

command, which is used to identify object types. And the third reference shows that Web

Services are used to carry out activities at the request of a client.).

Claim 23:

Short discloses all the elements of claim 19, as noted above, and Short further discloses wherein the description document is in the Web Services Description Language (WSDL) (Short: Chapter 1 – "Why Web Services?", Section 2: "Web Services Design Decisions", Subsection: "Choosing Description Mechanisms, particularly lines 1-3 and 13-14 of this subsection; This reference describes a WSDL document (description document) which is transferred between client, Web Server, and server in order to facilitate communication between the three components. Also note Chapter 1 – "Why Web Services?", Section 1: "Web Services Building Blocks".).

Claim 25:

Short discloses all the elements of claim 19, as noted above, and Short further discloses wherein the means for deserializing the object in the request message is a runtime environment (Short: Chapter 7 – "XML Serialization", Section 7: "Server-Side Validation", line 11).

Claim 26:

Short discloses all the elements of claim 19, as noted above, and Short further discloses wherein the means for accessing the database communicates with a database server for the database to carry out the requested database operation method (Short: Chapter 1 – "Why Web Services?", Section 1: "Web Services Building Blocks", lines 25-28; Note especially "message must be transferred between the client and the server". This requires communication between the client and the database server.).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for

all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described
> as set forth in section 102 of this title, if the differences between the subject matter sought to
> be patented and the prior art are such that the subject matter as a whole would have been
> obvious at the time the invention was made to a person having ordinary skill in the art to which
> said subject matter pertains. Patentability shall not be negatived by the manner in which the
> invention was made.

4.   Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Short in further view of U.S. Patent Application Publication Number

2001/0034743 issued to Edwin Thomas (hereinafter "Thomas").

Claim 3:

Short discloses all the elements of claim 2, as noted above, and Short

further discloses wherein the step of receiving includes converting the description

document into a compiled software format (Short: Chapter 6 – "ASP.NET", Section 1:

"Creating an ASP.NET Web Service", lines 31-33).

Short does not explicitly disclose wherein the compiling of software occurs

at the client computer. However, Thomas discloses wherein the compiling of

software occurs at the client computer (Thomas: paragraph [0138], lines 4-9).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the teachings of Short with the teachings of

Thomas noted above. The skilled artisan would have been motivated to improve

the teachings of Short per the above such that the majority of the processing is

accomplished away from the server (Thomas: paragraph [0138], lines 8-9).

Claim 4:

The combination of Short and Thomas discloses all the elements of claim 3, as noted above, and Short further discloses wherein the compiled software format is for an intermediate language for a computer runtime environment (Short: Chapter 11 – "Debugging Web Services", Section 2: "Information the Debugger Needs", lines 16-18).

5.   Claims 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Short in further view of U.S. Patent Application Publication Number 2004/0162871 issued to Kuldipsingh A. Pabla et al. (hereinafter "Pabla").

Claim 5:

Short discloses all the elements of claim 1, as noted above, but does not explicitly disclose wherein the database operation methods includes a search method. However, Pabla discloses wherein the database operation methods includes a search method (Pabla: see program code underneath paragraph [0105]; The code listed is program code for a class. One of the methods included with the class is a search method named "public int search()".).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a search method as a database operation method. The skilled artisan would have been motivated to improve the teachings of Short per the above such the search method could return any contents of the database matching an input parameter.

Claim 7:

Short discloses all the elements of claim 1, as noted above, but does not explicitly disclose wherein the database operation methods includes at least one method with an array as an operand. However, Pabla discloses wherein the database operation methods includes at least one method with an array as an operand (Pabla: see program code above paragraph [0104]; The code listed is program code for a class. One of the methods included with the class is a method named "Message" and it accepts an array as an operand.).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Short with the teachings of Pabla noted above. The skilled artisan would have been motivated to improve the teachings of Short with the teachings of Pabla noted above for the purpose of performing batch processing (Accepting an array of elements as an operand in a method or function is very well known in the art.).

6.   Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Short in view of Pabla and further in view of U.S. Patent Application Publication Number 2003/0233360 issued to Chai-Hup Tan (hereinafter "Tan").

Claim 6:

The combination of Short and Pabla discloses all the elements of claim 5, as noted above, but does not explicitly disclose wherein the search method returns an array as search results. However, Tan discloses wherein the search method returns an array as search results (Tan: paragraph [0046], lines 1-8).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the previously mentioned combination with the teachings of Tan noted above. The skilled artisan would have been motivated to improve the previously mentioned combination such that when multiple results are found for a search, all results are returned, not just the first match.

7.   Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Short in view of Pabla and further in view of U.S. Patent Number 5,392,448 issued to Robert F. Frankel et al. (hereinafter "Frankel").

Claim 8:

The combination of Short and Pabla discloses all the elements of claim 7, as noted above, but does not explicitly disclose wherein the at least one method is a create method. However, Frankel discloses wherein the at least one method is a create method (Frankel: column 10, lines 56-58).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the previously mentioned combination with the teachings of Frankel noted above. The skilled artisan would have been motivated to improve the previously mentioned combination per the above such that the class contains a method capable of creating a new object.

8.   Claims 10-11 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Short in further view Tan.

Claim 10:

Short discloses all the elements of claim 9, as noted above, but Short does not explicitly disclose having further computer-executable instructions for

performing the step of returning a result of carrying out the requested database

operation method. However, Tan discloses having further computer-executable

instructions for performing the step of returning a result of carrying out the

requested database operation method (Tan: paragraph [0046], lines 1-8; The array of

search results are returned. The database operation was the search.).

It would have been obvious for one of ordinary skill in the art to modify the

teachings of Short with the teachings of Tan noted above. The skilled artisan

would have been motivated to improve the teachings of Short per the above such

that after execution of a method (or function call) the result of the method (or

function call) is returned and can be used in further processing.

Claim 11:

The combination of Short and Tan discloses all the elements of claim 10,

as noted above, and Tan further discloses wherein the requested database

operation method is a search method, and wherein the result of the requested

database operation method includes an array (Tan: paragraph [0046], lines 1-8; An

array is returned as a result of a search operation.).

Claim 20:

Short discloses all the elements of claim 19, as noted above, but does not

explicitly disclose means returning a result of carrying out the requested

database operation method to the client. However, Tan discloses means

returning a result of carrying out the requested database operation to the client

(Tan: paragraph [0046], lines 1-8; The array of search results are returned. The database

operation was the search.).

It would have been obvious for one of ordinary skill in the art to modify the

teachings of Short with the teachings of Tan noted above. The skilled artisan

would have been motivated to improve the teachings of Short per the above such

that after execution of a method (or function call) the result of the method (or

function call) is returned and can be used in further processing.

Claim 21:

Short discloses all the elements of claim 19, as noted above, and but

Short does not explicitly disclose wherein the directory operation methods

include a search method returning an array as a search result. However, Tan

discloses wherein the directory operation methods include a search method

returning an array as a search result (Tan: paragraph [0046], lines 1-8).

It would have been obvious to one ordinary skill in the art at the time the

invention was made to modify the previously mentioned combination with the

teachings of Tan noted above. The skilled artisan would have been motivated to

improve the invention of Short per the above such that when multiple results are

found for a search, all results are returned, not just the first match.

9.   Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Short in further view of U.S. Patent Application Publication Number

2004/0267808 issued to Hiroyuki Matsushima (hereinafter "Matsushima").

Claim 12:

Short discloses all the elements of claim 9, as noted above, but does not

explicitly disclose wherein the requested database operation method has an

array as operand, and the request message includes a plurality of serialized

objects of different object types corresponding to elements of the array.

However, Matsushima discloses wherein the requested database operation

method has an array as operand, and the request includes a plurality of

serialized objects of different types corresponding to elements of the array

(Matsushima: paragraph [0210], lines 1-8).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the teachings of Short with the teachings of

Matsushima noted above. The skilled artisan would have been motivated to

improve the Short's invention per the above in order to help develop a scheme to

absorb the difference between two data formats being submitted through the

Web Server (Matsushima: paragraph [0006], lines 1-6).

10.   Claims 14, 15, and 24 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Short in further view of U.S. Patent Application Publication

Number 2004/0088713 issued to Myllymaki et al. (hereinafter "Myllymaki").

Claim 14:

Short discloses all the elements of claim 13, as noted above, but Short

does not explicitly disclose wherein the step of sending the description document

includes converting a compiled code module into the description document.

However, Myllymaki discloses wherein the step of sending the description

document includes converting a compiled code module into the description

document (Myllymaki: paragraphs [0070] and [0071]; Note the SD description code is

translated to executable code (machine or compiled code) and then a WSDL description

document is created from the SD description code.).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the teachings of Short with the teachings of

Myllymaki noted above for the purpose generating a WSDL description document

from compiled (executable) code (Myllymaki: paragraph [0071], lines 4-8). The skilled

artisan would have been motivated to improve the teachings of Short per the

above such that it would assist a client application to programmatically access a

website (Myllymaki: paragraph [0010], lines 1-2).

Claim 15:

The combination of Short and Myllymaki discloses all the elements of

claim 14, as noted above, and Short further discloses wherein the compiled code

module is in an intermediate language for a runtime environment platform (Short:

Chapter 11 – "Debugging Web Services", Section 2: "Information the Debugger Needs", lines

16-18).

Claim 24:

Short discloses all the elements of claim 23, as noted above, but does not

explicitly disclose wherein the means of providing the description document

includes a WSDL conversion module for converting a compiled code module into

the description document. However, Myllymaki discloses wherein the means of

providing the description document includes a WSDL conversion module for

converting a compiled code module into the description document (Myllymaki:

paragraphs [0070] and [0071]; The conversion of the executable (compiled) code to the WSDL

document requires some form of a WSDL conversion module.).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the teachings of Short with the teachings of

Myllymaki noted above for the purpose generating a WSDL description document

from compiled (executable) code (Myllymaki: paragraph [0071], lines 4-8). The skilled

artisan would have been motivated to improve the teachings of Short per the

above such that it would assist a client application to programmatically access a

website (Myllymaki: paragraph [0010], lines 1-2).

11.   Claim 17-18 and 27 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Short in further view of U.S. Patent Application Publication

Number 2005/0193269 issued to John Jeffrey Haswell et al. (hereinafter

"Haswell").

Claim 17:

Short discloses all the elements of claim 16, as noted above, but Short

does not explicitly disclose wherein communicating with the database server is

according to a directory access protocol. However, Haswell discloses wherein

communicating with the database server is according to a directory access

protocol (Haswell: paragraph [1529]).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the teachings of Short with the teachings of

Haswell noted above. The skilled artisan would have been motivated to improve

the teachings of Short per the above because LDAP (the directory access

protocol used by Haswell) is the industry standard Internet Protocol for accessing

directory services (Haswell: paragraph [1529], lines 3-5).

Claim 18:

The combination of Short and Haswell discloses all the elements of claim

17, as noted above, and Haswell further discloses wherein the database access

protocol is the Lightweight Directory Access Protocol (LDAP) (Haswell: paragraph

[1529]).

Claim 27:

Short discloses all the elements of claim 26, as noted above, and but

Short does not explicitly disclose wherein the means for accessing the database

communicates with the database server using the Lightweight Directory Access

Protocol (LDAP). However, Haswell discloses wherein the means for accessing

the database communicates with the database server using the Lightweight

Directory Access Protocol (LDAP) (Haswell: paragraph [1529]).

12.   Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Short in further view of Frankel.

Claim 22:

Short discloses all the elements of claim 19, as noted above, but does not

explicitly disclose wherein the database operation methods include a create

method having an array as an operand. However, Frankel discloses wherein the

database operation methods include a create method having an array as

operand (Frankel: column 22, lines 56-58).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the teachings of Short with the teachings of

Frankel noted above. The skilled artisan would have been motivated to improve

the invention of Short per the above such that a method is capable of performing

batch processing on a grouping of input data.

13.   Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over

Short in further view of U.S. Patent Application Publication Number

2002/0035559 issued to William L. Crowe et al. (hereinafter "Crowe").

Claim 28:

Short discloses all the elements of claim 1, as noted above, but Short

does not explicitly disclose wherein the plurality of database operations includes

one or more batch operations.

However, Crowe discloses wherein the plurality of database operations

includes one or more batch operations (Crowe: paragraph [0090], lines 7-11; The use of

batch processing and other basic database operations is extremely well-known and obvious in the

art.).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to modify the teachings of Short with the teachings of Crowe

noted above. The skilled artisan would have been motivated to improve the

teachings of Short per the above such that operations could be performed in

order to support an internal database (Crowe: paragraph [0090], lines 5-7).

Response to Arguments

Applicant Argues:

Short fails to teach or suggest wherein a description document includes class definitions
for a generic object class and for a service class, and wherein a plurality of database operation
methods are defined in the description document which are derived from the service class, as
recited in the combination with the other recited claim elements.

Examiner Responds:

Examiner is not persuaded. The Short reference clearly shows storing class definitions in a description document (Short: Chapter 1 – "Why Web Services?", Section 2: "Web Services Design Decisions", Subsection: "Choosing Description Mechanisms, particularly lines 1-7 and 12-14 of this subsection; Note specifically datatype (class) definitions.). A class definition includes methods. So since the description document includes the class definition, it must also include the methods belonging to that class (datatype). Furthermore, it is clearly shown in the above office action that the Short reference shows a generic object from which other objects can be derived (Short: Chapter 7 – "XML Serialization", Section 4: "Creating Derived Datatypes", lines 1-5 and 6-25). It is noted for the record that the code disclosed in the previously cited reference from Chapter 7 is exactly the same as the code shown in the Applicant's specification. It is simply for a different generic object.

Finally, finally the Short reference also discloses 'database operation methods' (Short: see at least Chapter 12 – "Scalability and Availability", Section 1: "Scaling Your Web Service", Subsection: "Replicating the Resource", lines 4-6; It should be noted that including methods in a class, object, or database to perform operations on a database is very well known in the art.).

The references given above clearly point out all of the Applicant's claim limitations. Furthermore, the cited references above disclose the elements that the Applicant argues are not present in the Short reference. The originally presented rejections under 35 U.S.C. 102(b) are upheld.

Applicant Argues:

Significantly, however, the Web method does not define any class, and particularly not a service class.

Examiner Responds:

Examiner is not persuaded. The examiner is not able to ascertain exactly what claim limitation the Applicant is trying to refute. However, it is clear, at the very least, that Short discloses defining a class (Short: Chapter 1 – "Why Web Services?", Section 2: "Web Services Design Decisions", Subsection: "Choosing Description Mechanisms, particularly lines 1-7 and 12-14 of this subsection; Note specifically datatype (class) definitions. Surely if Short provides a datatype (class) definition, Short must define a class.) and a service class (Short: Chapter 6 – "ASP.NET", Section 10: "Using the WSDL Utility to Generate Proxy Code", line 26; Note specifically the class definition for the Web service itself. This class is the 'service class'.). The originally presented rejections under 35 U.S.C. 102(b) are upheld.

Applicant Argues:

Moreover, Short's teachings for the Calculator Web service fail to teach or suggest defining a service class, let alone deriving a plurality of database operations methods from the service class. Moreover, the Add and Subtract operations further operate on client-input data, and fail to operate on a database as recited in combination with the other claim elements.

Examiner Responds:

Examiner is not persuaded. The Examiner has shown in the above office action that the Short reference teaches a service class. The Examiner has also shown that the Short reference discloses a plurality of database methods. And finally, the above action has shown that the Short reference discloses deriving one datatype (class) from another generic datatype (class). Since the Short reference does indeed disclose all the elements

of the applicant's invention, the examiner has decided to uphold the previously given

rejections.

Applicant Argues:

In particular, it will be noted that the cited art does not appear to teach or suggest wherein receiving a description document from the server for describing a service includes the client converting the description into a compiled software format (claim 3), or where the compiled software format is an intermediate language for a computer runtime environment (claim 4).

Examiner Responds:

Examiner is not persuaded. It is clear from the Short reference that portions of the

Web Service are compiled when the Web Service is accessed (Short: Chapter 6 –

"ASP.NET", Section 1: "Creating an ASP.NET Web Service", lines 31-33). Short also

discloses that the description document is part of the Web Service (Short: Chapter 1 - "Why

Web Services?", Section 1: "Web Service Building Blocks"). The examiner believes this is

sufficient evidence to conclude that the description document is in fact compiled.

It is also clear that the Short reference discloses wherein the format of the

software is an intermediate language. Specifically the language of choice by Short is the

"Microsoft Intermediate Language" (Short: Chapter 11 – "Debugging Web Services", Section

2: "Information the Debugger Needs", lines 16-18).

Since all the elements of the Applicant's invention have been disclosed by the

prior art cited above, the Examiner has decided to uphold the originally given rejection.

Applicant Argues:

Accordingly, the service is complied *by the server*, and fails to teach or suggest an embodiment wherein the *description document describing* the service is compiled *by the client*.

Examiner Responds:

The examiner was unable to find evidence to back up the Applicant's argument in the Short reference. With that said, the Examiner could also not find evidence in the Short reference that the compiling occurred at the client. So at most, it is not explicitly clear where the compiling occurs. All that is known is that the actual compiling carried out.

The act of compiling software code is obvious to one of ordinary skill in the art. Furthermore, as noted in the above office action, simply compiling code at a client as opposed to compiling the code at the server is unpatentable. See the Examiner's new rejection of claim 3 given above which was necessitated by the Applicant's amendment.

Applicant Argues:

In addition, the cited prior art fails to teach or suggest wherein the plurality of database operations includes one or more batch operations (claim 28).

Examiner Responds:

See Examiner's rejection of claim 28 in the above office action.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire

THREE MONTHS from the mailing date of this action. In the event a first reply is

filed within TWO MONTHS of the mailing date of this final action and the advisory

action is not mailed until after the end of the THREE-MONTH shortened statutory

period, then the shortened statutory period will expire on the date the advisory

action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

calculated from the mailing date of the advisory action. In no event, however, will

the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Conclusion

Any inquiry concerning this communication or earlier communications from

the examiner should be directed to Patrick A. Darno whose telephone number is

(571) 272-0788. The examiner can normally be reached on Monday - Friday,

9:00 am - 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the

examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax

phone number for the organization where this application or proceeding is
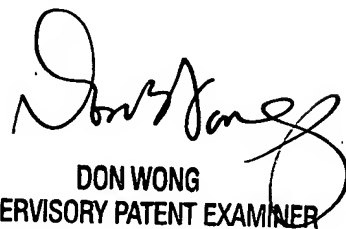
assigned is 571-273-8300.

Information regarding the status of an application may be obtained from

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free). If you would like assistance from a USPTO Customer Service

Representative or access to the automated information system, call 800-786-

9199 (IN USA OR CANADA) or 571-272-1000.

Patrick A. Darno
Examiner
Art Unit 2163

PD

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